

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A device for determining spatial co-ordinates of an object(s), comprising:

- a projector (3) which projects onto the object (2) a pattern (4) with known projection data;
- ~~a camera~~ two cameras (6) which ~~creates an object image (8)~~ respectively create two object images (8, 9) of the pattern (4) projected onto the object (2), the pattern (4) containing redundant encoded projection data;
- a data processing unit (7) connected downstream from the ~~camera~~ two cameras (6), which determines spatial co-ordinates of the object (2) from the two ~~object image (8)~~ images (8, 9) and the known projection data using a structured light approach, in which the spatial co-ordinates of the object (2) are determined using ~~[[a]]~~ known ~~distance~~ distances between the projector (3) and the ~~camera~~ two cameras (6); and
- ~~at least one further camera (6) which creates a further object image (9) and~~ the data processing unit (7) determines additional spatial co-ordinates of the object (2) from the two object images (8, 9) by a triangulation

method using a known distance between the two cameras (6)~~7~~  
~~and the data processing unit (7) restricts a search and~~  
searching for corresponding image points ( $S_l$ ,  $S_r$ ) ~~[[to]]~~ for  
problem areas in which an evaluation of redundant data of  
the object images (8, 9) produces an erroneous result.

2. (canceled)

3. (previously presented) The device as claimed in  
claim 1, wherein epipolar lines (16, 17) pass through a plurality  
of marks of the pattern (4).

4. (canceled)

5. (currently amended) A method for determining spatial  
co-ordinates of an object(s), comprising:

- projecting a pattern (4) with known projection data onto  
an object (2) by using a projector (3);
- creating ~~[[an]]~~ two object ~~image (8)~~ images (8, 9) with  
aid of ~~a-camera~~ two cameras (6);
- determining the spatial co-ordinates from the known  
projection data in a data processing unit (7) using a  
structured light approach, in which the spatial co-  
ordinates of the object (2) are respectively determined

using a known distance between the projector (3) and the  
~~camera~~ two cameras (6);

- ~~recording with aid of a further camera (6) a further object  
image (9) and that,~~ if the spatial co-ordinates are determined  
incorrectly, determining additional spatial co-ordinates of the  
object (2) are on a basis of the projection data and one of the  
object images (8, 9) by searching for corresponding image points  
( $S_l$ ,  $S_r$ ) in the object images (8, 9) and a subsequent  
triangulation using a known distance between the two cameras (6).

6. (previously presented) The method as claimed  
in claim 5, wherein corresponding pixels ( $S_l$ ,  $S_r$ ) are searched for  
along epipolar lines (16, 17).

7. (canceled)

8. (canceled)

9. (canceled)

10. (previously presented) A method for determining  
spatial co-ordinates of an object(s), comprising:

- projecting a pattern (4) with known projection data onto an object (2) by using a projector (3);
- creating ~~an object image (8)~~ two object images (8, 9) with aid of ~~a camera~~ two cameras (6) ;
- determining the spatial co-ordinates from the known projection data in a data processing unit (7) using a structured light approach, in which the spatial co-ordinates of the object (2) are respectively determined using ~~[[a]] known distance~~ distances between the projector (3) and the ~~camera~~ two cameras (6); and
- ~~recording with aid of a further camera (6) a further object image (9) and that,~~ if the spatial co-ordinates are determined incorrectly, additional spatial co-ordinates of the object (2) are determined on a basis of the projection data and one of the object images (8, 9) by searching for corresponding image points ( $S_1$ ,  $S_r$ ) in the object images (8, 9) and a subsequent triangulation using a known distance between the two cameras (6),

wherein the pattern (4) contains redundant encoded projection data, and the data processing unit (7) restricts the search for corresponding image points ( $S_1$ ,  $S_r$ ) to problem areas in which an evaluation of the redundant data of the object images (8, 9) produces an erroneous result.

11. (previously presented) The method as claimed in claim 10, wherein corresponding pixels ( $S_l$ ,  $S_r$ ) are searched for along epipolar lines (16, 17).

12. (previously presented) The method as claimed in claim 10, wherein epipolar lines (16, 17) pass through a plurality of marks of the pattern (4).

13. (new) The device according to claim 1, wherein the pattern (4) is composed of stripes that are projected consecutively onto the object (2), with stripe widths of the pattern varying.

14. (new) The device according to claim 1, wherein the two object images (8, 9) yield three-dimensional data.

15. (new) The method according to claim 5, wherein the pattern (4) is composed of stripes that are projected consecutively onto the object (2), with stripe widths of the pattern varying.

16. (new) The method according to claim 5, wherein the two object images (8, 9) yield three-dimensional data.

17. (new) The method according to claim 10, wherein the pattern (4) is composed of stripes that are projected consecutively onto the object (2), with stripe widths of the pattern varying.

18. (new) The method according to claim 10, wherein the two object images (8, 9) yield three-dimensional data.